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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/787,099

02/27/2004

Takuya Kadota

Q80152

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EXAMINER

NOTE, JANIS L

ART UNIT

PAPER NUMBER

1756

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/12/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/787,099

Applicant(s)

KADOTA ET AL.

Examiner

Janis L. Dote

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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1. The examiner acknowledges the amendments to claims 1, 3, 4, and 7 set forth in the amendment filed on Nov. 6, 2006.

Claims 1, 3-5, and 7 are pending.

2. The rejections of claims 3 and 7 under 35 U.S.C. 112, second and first paragraphs, set forth in the office action mailed on Jul. 5, 2006, paragraphs 5 and 7, respectively, have been withdrawn in response to the amendments to claims 3 and 7 filed on Nov. 6, 2006.

The rejection of claims 3/1 and 7/(4,5) under 35 U.S.C. 102(e) over US 2005/0100807 A1 (Yamazaki), as evidenced by applicants' admissions I, set forth in the office action mailed on Jul. 5, 2006, paragraph 13, has been withdrawn in response to the amendments to claims 3 and 7 filed on Nov. 6, 2006. Applicants have perfected their claim to foreign priority under 35 U.S.C. 119 for the subject matter recited in amended claims 3/1 and 7/(4,5). The verified English-language translations of the priority documents Japanese Patent Applications 2003-053833 (JP'833) and 2003-053834 (JP'834), which were filed on Mar. 16, 2006, provide antecedent basis as set forth under 35 U.S.C. 112, first paragraph, for the subject matter recited in instant claim 3/1 and claim 7/(4,5), respectively. Accordingly, Yamazaki is no longer prior art

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with respect to the subject matter recited instant claims 3/1 and 7/(4,5).

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Instant claim 3 is indefinite in the phrase "toner is the toner of claim 1 and has a dynamic viscoelastic characteristic showing a behavior of a linear region (L1) at an inlet of a fixing nip, a behavior of a non-linear region (NL) at the fixing nip part, and a behavior of a linear region (L2) at an outlet of the fixing nip" (emphasis added) because it is not clear whether the "dynamic viscoelastic characteristics" in the regions L1 and NL recited in claim 3 refer to the storage moduli  $G'$  (L1) and  $G'$  (NL) recited in instant claim 1 or to other "dynamic viscoelastic characteristics."

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Instant claim 7 is indefinite in the phrase "toner is the toner of claim 4 or 5 and has a dynamic viscoelastic characteristic showing a behavior of a linear region (L1) at an inlet of a fixing nip, a behavior of a non-linear region (NL) at the fixing nip part, and a behavior of a linear region (L2) at an outlet of the fixing nip" (emphasis added) because it is not clear whether the "dynamic viscoelastic characteristics" in the regions L2 and NL recited in claim 7 refer to the storage modulus  $G'$  (L2) recited in instant claim 4 and the storage moduli  $G'$  (L2) and  $G'$  (NL) recited in instant claim 5, or to other "dynamic viscoelastic characteristics."

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 02/084408 A1 (Matsumura), as evidenced by applicants' admissions at page 5, lines 2-9 and 14-19, page 76, lines 1-12, page 77, lines 1-5, 7-9, 11-14, 16-17, and 20-22, page 88, lines 1-12, page 88, line 25, to page 89, line 12, and page 90, lines 5-6, 12-13, and 20-21, of the originally filed specification; and Tables 1A and 1B at pages 75 and 87,

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respectively, of the originally filed specification (applicants' admission I').

US 2004/0132920 A1 (US'920), filed under 35 U.S.C. 371, is the national stage of the WO application of Matsumura, and therefore is presumed to be an accurate English-language translation of the WO application of Matsumura. 35 USC 371(c)(2), 372(b), and 365(c). See US'920, the translation of Matsumura, for cites.

Matsumura discloses a toner comprising 100 parts by weight of toner particles comprising a polyester binder resin and a colorant. The polyester binder resin comprises two components: (1a) 15 parts by weight of a block polyester copolymer; and (2a) 85 parts by weight of a non-crystalline, i.e., amorphous polyester resin. US'920, paragraphs 0309-0310, and example 19 at paragraphs 0311 and in Table 7 at page 28. The polyester binder resin meets the binder resin limitations recited in instant claims 1 and 4. Matsumura discloses that the binder resin is colorless and transparent. Table 7, example 19. According to Matsumura, when the block polyester copolymer (1a) and the non-crystalline polyester resin (2a) are compatible, the resultant binder resin is colorless. US'920, paragraph 0139. Matsumura further discloses a fixing device which fixes an unfixed toner image on a recording medium where the toner image

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is formed from the toner in example 19 of Matsumura. US'920, paragraphs 0284-0285 and Table 7, example 19.

Matsumura does not disclose that the toner has the storage modulus properties recited in instant claims 1, 4, and 5. However, Matsumura discloses that the toner exhibits a low temperature fixability of 115°C, and a region of no offset between 105 to greater than 210°C, i.e., a minimum non-offset temperature of 105°C. Table 7, example 19. These properties appear to be the same properties sought by applicants.

The originally filed specification at page 5, lines 2-9, discloses that an "object of a first aspect of the present invention . . . is to provide a toner which can effectively improve low temperature fixing stability and offset resistance of a toner by using dynamic viscoelastic characteristics more conformable for actual toner behavior in fixation by heating." The originally filed specification at page 5, lines 14-19, discloses that another "object [of] a second aspect of the present invention . . . is to provide a toner which can effectively improve fixing stability and offset resistance to a toner by using dynamic viscoelastic characteristics more conformable to actual toner behavior in fixation by heating."

The originally filed specification shows that in an oil-less fixing device, some toners that meet the storage modulus

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properties recited in instant claim 1 exhibited a low temperature offset and a "minimum temperature of good fixing rate" of 160°C or less; while other toners that meet the storage modulus properties recited in instant claim 1 exhibited a low temperature offset and a "minimum temperature of good fixing rate" of "higher than 160°C and lower than 180°C." See Table 1A at page 75 of the originally filed specification, examples 1A through 3A and 6A; the originally filed specification, page 76, lines 1-12; and page 77, lines 1-5, 11-14, and 20-22.

Toners that do not possess the storage modulus properties recited in instant claim 1 exhibited a low temperature offset and a "minimum temperature of good fixing rate" of 180°C or higher. See Table 1A, examples 5A and 7A; and page 76, lines 1-12; and page 77, lines 7-9 and 16-17.

The originally filed specification also shows that some toners that meet the storage modulus limitations recited in instant claims 4 and 5 exhibited a hot offset temperature of 200°C or higher and a "minimum temperature of good fixing rate" of 160°C or less; while other toners that meet the storage modulus limitations recited in instant claims 4 and 5 exhibited a hot offset temperature of "higher than 180°C and lower than 200°C" and a "minimum temperature of good fixing rate" of 160°C or less. See Table 1B at page 87 of the originally filed



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specification, examples 2B and 3B; page 88, lines 1-12; page 88, line 25, to page 89, line 2; and page 89, lines 7-10, and 16-18.

A toner that does not possess the storage modulus limitations recited in instant claims 4 and 5 exhibited a hot offset temperature of 200°C or higher and a "minimum temperature of good fixing rate" of 180°C or higher. See Table 1B at page 87, example 5B; and page 89, lines 1-12; page 90, lines 5-6, 12-13, and 20-21.

Thus, because the Matsumura toner meets the toner compositional limitations recited in the instant claims and because the Matsumura toner appears to provide the same properties sought by applicants, it is reasonable to presume that the Matsumura toner has the storage modulus properties recited in instant claims 1, 4, and 5. The burden is on applicants to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

7. Claims 3/(1) and 7/(4,5) are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,748,192 B2 (Izawa) combined with Matsumura, as evidenced by applicants' admission I' and applicants' admission at page 10, lines 3-6, of the originally filed specification.

US'920, filed under 35 U.S.C. 371, is the national stage of

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the WO application of Matsumura, and therefore is presumed to be an accurate English-language translation of the WO application of Matsumura. 35 USC 371(c)(2), 372(b), and 365(c). See US'920, the translation of Matsumura, for cites.

Izawa discloses an electrophotographic image forming apparatus that meets the structural components recited in instant claims 3 and 7, but for the particular toner. The apparatus shown in Fig. 1 comprises a photosensitive drum **1**, i.e., an image carrier on which an electrostatic latent image is formed, a charging roller **2**, an exposure unit **3**, a developing unit **4** that comprises a toner, a transfer device **5**, and a heat-pressure fixing unit **6**. The heat-pressure fixing unit **6** comprises a heating roller **10** and a pressure roller **20**, which fixes a toner image to a recording medium. According to Izawa, the fixing unit is effective for oilless fixing. Figs. 1 and 2; col. 6, line 28, to col. 7, line 10; and col. 17, lines 57-58.

Izawa does not exemplify the particular toners recited in the instant claims. However, Izawa does not limit the type of toner used.

Matsumura discloses a toner as described in paragraph 6 above, which is incorporated herein by reference. The Matsumura toner meets the toner compositional limitations and appears to

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have the storage modulus properties recited in instant claims 3/(1) and 7/(4,5).

According to Matsumura, the toner exhibits excellent low-temperature fixation performance, high-temperature offset-resistance and anti-blocking performance. The toner also provides satisfactory color development. Paragraph 0016 and Table 7, example 19.

Matsumura does not disclose that is toner has the dynamic viscoelastic characteristics at the inlet of the fixing nip, at the fixing nip, and at the outlet of the fixing nip as recited in instant claims 3 and 7.

The originally filed specification at page 10, lines 3-6, states that "[a] viscoelasticity regulated in the present invention can be provided by regulating molecular weight distribution, degree of cross-linkage and molecular structure of a resin in the toner of the present invention." Thus, it appears that the "dynamic viscoelastic characteristics" at the various locations of the fixing nip is dependent on the toner binder resin, and not on the particulars of the fixing device. As discussed above, the Matsumura toner meets the toner, particularly the binder resin, compositional limitations recited in the instant claims. In addition, Matsumura teaches that its toner fixing properties are exhibited when the toner is fixed

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with a heat fixation roller. US'920, paragraphs 0284-0287, and Table 7, example 19. It is reasonable to presume that the Matsumura heat fixing roller forms a fixing nip. For the reasons discussed in paragraph 6 above, the Matsumura toner appears to have the storage modulus properties recited in instant claims 3/1 and 7/(4,5), i.e., the storage moduli  $G'(L1)$  in a linear region and  $G'(NL)$  in a non-linear region as recited in instant claim 3, the storage modulus  $G'(L2)$  in a linear region recited in instant claim 7/4, and the storage moduli  $G'(L2)$  and  $G'(NL)$  recited in instant claim 7/5. The storage moduli  $G'(L1)$ ,  $G'(NL)$ , and  $G'(L2)$  appear to meet the "dynamic viscoelastic characteristics" recited in instant claims 3 and 7. Accordingly, it is reasonable to presume that the Matsumura toner satisfies the "dynamic viscoelastic characteristics" recited in the instant claims 3 and 7. The burden is on applicants to prove otherwise. Fitzgerald, supra.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Matsumura, to use the toner disclosed by Matsumura as the toner in the developing unit of the image forming apparatus disclosed by Izawa. That person would have had a reasonable expectation of successfully obtaining an electrophotographic image forming apparatus that is capable of forming toner images that have the properties

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disclosed by Matsumura.

8. Applicant's arguments filed on May 16, 2006, as applicable to the rejections over Matsumura set forth in paragraphs 6 and 7 above have been fully considered but they are not persuasive.

(1) The rejection of claims 1, 4, and 5.

Applicants assert that the examiner has not met her burden to provide a reasonable technical basis for asserting that the Matsumura toner has the storage modulus properties recited in instant claims 1, 4, and 5. Applicants assert that the disclosure in Matsumura is insufficient to determine the storage modulus of the toner. Applicants assert that "Matsumura does not disclose or suggest the claimed toner having specific viscoelastic characteristics, i.e., the relationship between storage modulus of a linear region and a nonlinear region."

Applicants' assertions are not persuasive. For the reasons discussed in the rejection in paragraph 6 above, a prima facie case has been established that the Matsumura toner has the storage modulus properties recited in instant claims 1, 4, and 5. As discussed in paragraph 6, the Matsumura toner meets the toner compositional limitations recited in the instant claims and appears to exhibit the same properties sought by applicants' invention. Since the PTO cannot conduct tests, the

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burden is properly shifted to applicants to come forward with objective evidence to distinguish the claimed subject matter with the reference material. Applicants have not provided any objective evidence to show that the Matsumura toner does not have the storage modulus properties recited in instant claims 1, 4, and 5.

Applicants also assert that it is improper for the examiner to rely on the description of applicants' invention as prior art against the claims.

However, the examiner is not relying on the description of applicants' invention as prior art. Rather, the examiner is relying on the description of applicants' invention to determine the meets and bounds of the claimed toner. It is proper to look to the originally filed specification to ascertain what properties are obtained by the toner recited in the instant claims, and thereby determine whether or not the preponderance of the evidence indicates that prior art toners possess said properties. The examiner is merely using the available evidence of record to determine whether or not it is reasonable to transfer the burden to applicants to distinguish over prior art toners. Such prior art toners are deemed to be the ones that meet all of the expressed structural and compositional limitations in the claims, and that are disclosed to have

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properties that are consistent with the properties taught by applicants as advantages due to toners having the recited storage modulus properties. Patents for compositions of matter are not properly issued for the discovery of a previously unknown or unrecognized property of an old material.

Thus, for the reasons discussed above and in the rejection in paragraph 6 above, it is reasonable to presume that the Matsumura toner has the storage modulus properties recited in instant claims 1, 4, and 5. Applicants have not come forward with any objective evidence to show otherwise. Accordingly, the rejection of claims 1, 4, and 5 over Matsumura stand.

(2) The rejection of claims 3/1 and 7/(4,5).

Applicants assert that none of the cited prior art discloses or suggests the claimed toner having specific viscoelastic characteristics as recited in the instant claims. Applicants again assert that it is improper for the examiner to use the description of applicants' invention in the instant disclosure as prior art against the claims. Applicants assert that the examiner's conclusion of obviousness is based on improper hindsight.

Applicants' assertions are not persuasive. For the reasons discussed in the rejection in paragraph 7 above, a prima facie case has been established that the Matsumura toner has the

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storage modulus properties and has the "dynamic viscoelastic characteristics" recited in instant claims 3/1 and 7/(4,5). As discussed in paragraph 7, it appears that the "dynamic viscoelastic characteristics" recited in instant claims 3 and 7 are dependent on the toner, and not on the particulars of the fixing device. As discussed in paragraph 7, the Matsumura toner meets the toner, particularly the binder resin, limitations and appears to exhibit the same properties sought by applicants' invention. Applicants have not provided any objective evidence to show that the Matsumura toner does not have the "dynamic viscoelastic characteristics" recited in instant claims 3/1 and 7/(4,5).

Applicants' assertion regarding the impropriety of the examiner's reliance on the description of applicants' invention has been addressed in item (1) above.

Thus, for the reasons discussed above and in the rejection in paragraph 7 above, it is reasonable to presume that the Matsumura toner has the storage modulus properties and the "dynamic viscoelastic characteristics" recited in instant claims 3/1 and 7/(4,5). Applicants have not come forward with any objective evidence to show otherwise.

Furthermore, applicants' assertion that the examiner's conclusion of obviousness is based upon improper hindsight



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reasoning is not persuasive. It must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Moreover, as discussed in paragraph 7, Matsumura provides reason, motivation, and suggestion to a person having ordinary skill in the art to use its toner. In particular, according to Matsumura, its toner exhibits excellent low-temperature fixation performance, high-temperature offset-resistance and anti-blocking performance. The toner also provides satisfactory color development.

Accordingly, for the reasons discussed in the rejection in paragraph 7, the combined teachings of the cited prior art render obvious the subject matter recited in the instant claims. Thus, the rejection in paragraph 7 stand.

9. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are

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reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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*Janis L. Dote*  
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**PRIMARY EXAMINER**  
**GROUP 1500-**  
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JLD

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